

**What is claimed is:**

**1.** A method for handling an alarm notification in a management system, the method comprising the steps of:

a) in a first management node of the management system, appending an identification of the first management node to a path portion of an alarm identifier  
5 field of the alarm notification;

b) transmitting the alarm notification from the first management node to a third management node of the management system;

wherein the alarm notification comprises a system identification field for identifying a node that lastly handled the alarm notification, the alarm identifier  
10 field for identifying the alarm notification, and an alarm attribute field carrying an alarm payload, wherein the alarm identifier field comprises an alarm identifier portion and the path portion having at least one first member related to the identification of the first management node.

**2.** The method for handling the alarm notification as claimed in claim 1, further comprising the step of:

c) inserting an identification of the first management node in the system identification field of the alarm notification.

**3.** The method for handling the alarm notification as claimed in claim 2, wherein the identification of the first management node is a system distinguished name (SystemDN), and the system identification field is a SystemDN field.

4. The method for handling the alarm notification as claimed in claim 2, wherein the alarm notification is created by the first management node and the path portion of the alarm identifier comprises only one first member comprising the identification of the first management node.

5. The method for handling the alarm notification as claimed in claim 4, wherein the identification of the first management node is a system distinguished name (SystemDN) of the first management node that identifies the first management node.

6. The method for handling the alarm notification as claimed in claim 2, the method further comprising before the step a), the step of:

d) receiving the alarm notification by the first management node from a second management node, the path portion of the alarm identifier of the received  
5 alarm notification comprising a second member related to the identification of the second management node;

wherein in step a), the first management node appends the first member comprising its own identification to the path portion of the alarm identifier field of the alarm notification.

7. The method for handling the alarm notification as claimed in claim 6, wherein:

the first member comprises a system distinguished name (SystemDN) of the first management node that identifies the first management node; and

5 the second member comprises a SystemDN of the second management node that identifies the second management node.

8. The method for handling the alarm notification as claimed in claim 1, the method further comprising the steps of:

e) receiving by the third management node the alarm notification from the first management node;

5 f) sending an alarm operation message from the third management node to the first management node to instruct an operation regarding the alarm notification, the alarm operation message comprising an alarm identifier field for identifying the alarm notification on which the operation is to be performed which is identical to the alarm identifier field of the alarm notification;

10 g) upon receipt of the alarm operation message by the first management node, extracting a path portion of the alarm identifier field received in the alarm operation message; and

h) if the extracted path portion comprises not only one first member comprising the identification of the first management node, but also a second member related to the identification of the second management node:

h.1) removing the first member from the path portion of the alarm operation message's alarm identifier field;

h.2) sending from the first management node to the second management node the alarm operation message without the first member in the path portion.

9. The method for handling the alarm notification as claimed in claim 8, further comprising the step of:

i) if the extracted path portion comprises only the first member comprising the identification of the first management node, processing the alarm operation message locally in the first management system.

10. The method for handling the alarm notification as claimed in claim 8, wherein the alarm operation message is an alarm acknowledgement message.

11. The method for handling the alarm notification as claimed in claim 9, wherein the alarm operation message is an alarm acknowledgement message.

12. The method for handling the alarm notification as claimed in claim 10, wherein the step h.2) comprises sending from the first management node to the second management node the alarm acknowledgement message comprising:

the alarm identifier field comprising first, a path portion having the second member related to the identification of the second management node and, second, an alarm identifier portion for identifying the alarm referred to by the alarm acknowledgement message; and

an alarm attribute field carrying an alarm attribute identical to the alarm attribute field of the alarm notification.

13. A management system comprising:

a third management node;

a first management node appending its identification to a path portion of an alarm identifier field of an alarm notification, and sending the alarm notification to the a third management node;

wherein the alarm notification comprises a system identification field for identifying a node that lastly handled the alarm notification, the alarm identifier field for identifying the alarm notification, and an alarm attribute field carrying an alarm payload, the alarm identifier field comprising an alarm identifier portion and the path portion having at least one first member related to the identification of the first management node.

14. The management system as claimed in claim 13, wherein the first management node inserts its own identification in the system identification field of the alarm notification.

15. The management system as claimed in claim 14, wherein the identification of the first management node is a system distinguished name (SystemDN), and the system identification field is a SystemDN field.

16. The management system as claimed in claim 14, wherein the alarm notification is created by the first management node and the path portion of the alarm identifier comprises only one first member comprising the identification of the first management node.

17. The management system as claimed in claim 16, wherein the identification of the first management node is a system distinguished name (SystemDN) of the first management node that identifies the first management node.

18. The management system as claimed in claim 14, further comprising:  
a second management node transmitting the alarm notification to the first management node,

wherein the path portion of the alarm identifier of the alarm notification  
5 received by the first management node comprises a second member related to the identification of the second management node, and when appending its identification to the path portion of the alarm identifier field of the alarm notification, the first management node appends the first member comprising its own identification.

19. The management system as claimed in claim 18, wherein:

the first member comprises a system distinguished name (SystemDN) of the first management node that identifies the first management node; and

the second member comprises a SystemDN of the second management  
5 node that identifies the second management node.

20. The management system as claimed in claim 13, wherein:

the third management node receives the alarm notification from the first management node;

the third management node sends an alarm operation message to the first  
5 management node to instruct an operation regarding the alarm notification, the alarm operation message comprising an alarm identifier field for identifying the alarm notification on which the operation is to be performed which is identical to the alarm identifier field of the alarm notification;

upon receipt of the alarm operation message, the first management node  
10 extracts a path portion of the alarm identifier field received in the alarm operation message; and

if the extracted path portion comprises not only one first member comprising the identification of the first management node, but also a second member related to the identification of the second management node:

15 the first management node removes the first member from the path portion of the alarm operation message's alarm identifier field;

the first management node sends to the second management node the alarm operation message without the first member in the path portion.

21. The management system as claimed in claim 20, wherein:

if the extracted path portion comprises only the first member comprising the identification of the first management node, the first management node locally processes the alarm operation message.

22. The management system as claimed in claim 20, wherein the alarm operation message is an alarm acknowledgement message.

23. The management system as claimed in claim 21, wherein the alarm operation message is an alarm acknowledgement message.

24. The management system as claimed in claim 22, wherein the first management node sends to the second management node the alarm acknowledgement message comprising:

the alarm identifier field comprising first, a path portion having the second  
5 member related to the identification of the second management node and, second, an alarm identifier portion for identifying the alarm referred to by the alarm acknowledgement message; and

an alarm attribute field carrying an alarm attribute identical to the alarm attribute field of the alarm notification.

25. A first management node acting to handle an alarm notification message, the alarm notification message comprising a system distinguished name field, an alarm identifier field and an alarm attribute field, wherein when handling the alarm notification message, the first management node appends its identification  
5 to a path portion of the alarm identifier field.

26. The first management node of claim 25, wherein the alarm notification message is received by the first management node from a second management node and is forwarded by the first management node to third management node, wherein the first management node appends its own identification to the path  
5 portion of the alarm identifier field that already comprises an identification of the second management node.

27. The first management node of claim 26, wherein the alarm identifier field of the alarm notification message further comprises a system distinguished name field where the first management node inserts its identification before forwarding the alarm notification to the third node.

28. The first management node of claim 26 receiving from the third node an alarm operation message identified by, and comprising, the alarm identifier field, and upon receipt of the alarm operation message, the first management node removing its own identification from the path portion of the alarm identifier field,  
5 and if another node's identification is detected in the path portion, forwarding the alarm operation message without its own identification to a node corresponding to the another node identification.

29. The first management node of claim 26 receiving from the third node an alarm operation message identified by, and comprising, the alarm identifier field, and upon receipt of the alarm operation message, the first management node detecting its own identification from the path portion of the alarm identifier field,  
5 and if no another node's identification is detected in the path portion, processing the alarm operation message locally in the first management node.



**30.** The first management node claimed in claim 28, wherein the alarm operation message is an alarm acknowledgement message.

**31.** The first management node claimed in claim 29 wherein the alarm operation message is an alarm acknowledgement message.

**32.** An alarm notification transmitted from a first node to a second node of a management system, the alarm notification comprising:

a system identification field for identifying the first node;

an alarm identifier field for identifying the alarm notification, wherein the  
5 alarm identifier field comprises a path portion comprising an identification of a path followed by the alarm notification, and an alarm identification portion comprising an alarm identification assigned by a creator node of the alarm notification; and

an alarm attribute field carrying an alarm payload.

**33.** The alarm notification claimed in claim 32, wherein the path portion's identification comprises a first member identifying the first node.

**34.** The alarm notification claimed in claim 33, wherein the alarm is received by the first node from a third node, and the path portion's identification further comprises a second member identifying the third node.

**35.** The alarm notification claimed in claim 33, wherein path portion's identification comprises a series of members wherein each member identifies each one node the alarm notification traversed.

**36.** The alarm notification claimed in claim 35, wherein the alarm identifier field comprises a string of alphanumeric characters identifying the path portion and the alarm identification portion.